Day : Friday
Date: 6/15/2007

PALM INTRANET

Time: 17:18:59

Inventor Name Search Result

Your Search was:

Last Name = ALIVISATOS
First Name = PAUL

Application#	Patent#	Status	Date Filed	Title	Inventor Name
08978450	5990479	150	11/25/1997	ORGANO LUIMESCENT SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
09259982	6207392	150	03/01/1999	SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
09349833	6423551	150	07/08/1999	ORGANO LUMINESCENT SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
09781621	6727065	150	02/12/2001	METHODS OF USE OF SEMICONDUCTOR NANOCRYSTAL PROBES FOR TREATING A MATERIAL	ALIVISATOS, PAUL
09865130	6699723	150	05/24/2001	ORGANO LUMINESCENT SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
10155759	6927069	150	05/24/2002	ORGANO LUMINESCENT SEMICONDUCTOR NANOCRYSTAL PROBES	ALIVISATOS, PAUL

				FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	
10155918	Not Issued	161	05/24/2002	Semiconductor nanocrystal probes for biological applications and process for making and using such probes	ALIVISATOS, PAUL
10918622	7101718	150	08/12/2004	ORGANO LUMINESCENT SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
11370656	Not Issued	90	03/07/2006	ORGANO LUMINESCENT SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL
11566998	Not Issued	30	12/05/2006	SEMICONDUCTOR NANOCRYSTAL PROBES FOR BIOLOGICAL APPLICATIONS AND PROCESS FOR MAKING AND USING SUCH PROBES	ALIVISATOS, PAUL

Inventor Search Completed: No Records to Display.

Search Another: Inventor **Last Name** Alivisatos **First Name** Paul Search

To go back use Back button on your browser toolbar.

Back to PALM | ASSIGNMENT | OASIS | Home page

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 41 through 48 of 48 returned.

☐ 41. Document ID: WO 2007021069 A1

AB: Disclosed are a light emitting diode employing an array of nanorods and a method of fabricating the same. The light emitting diode comprises an array of semiconductor nanorods positioned on a substrate. An upper electrode layer is deposited on the array of the nanorods such that an empty space remains between adjacent ones of the nanorods. Since the space between adjacent ones of the nanorods is not filled with an insulating material, the light extraction efficiency of a light emitting diode can be improved and a method of fabricating the light emitting diode can be simplified.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

☐ 42. Document ID: WO 2004109815 A1

AB: CHG DATE=20041228 STATUS=O>Provided are a contact fabric using a heterostructure of metal/semiconductor nanorods and a method of manufacturing the same. An ohmic contact fabric having a low contact resistance or a Schottky contact fabric having a rectification characteristic is formed by selectively depositing metal of nano-sizes onto predetermined portions of zinc oxide/semiconductor nanorods and controlling the work function of the deposited metal and the interfacial characteristics of metal/zinc oxide. The contact fabric can be applied to various nano-sized electronic devices, including Schottky diodes, optical devices, and arrays thereof.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

☐ 43. Document ID: WO 2007021069 A1

AB: NOVELTY - A light emitting diode comprises an array of semiconductor nanorods (27) positioned on a substrate (21); and an upper electrode layer (29) deposited on the array such that an empty space remains between adjacent ones of the nanorods.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of fabricating a light emitting diode, comprising growing nanorods on a substrate; and depositing an upper electrode layer on the nanorods, such that an empty space remains between adjacent ones of the nanorods.

USE - Used as light emitting diode.

ADVANTAGE - The light emitting diode has improved light extraction efficiency, and can be fabricated through simplified processes, reducing fabrication costs.

DESCRIPTION OF DRAWING(S) - The figure is a perspective view illustrating a light emitting diode.

Substrate 21

Semiconductor nanorods 27

First and second semiconductor nanorods 27a, 27c

Upper electrode layer 29

☐ 44. Document ID: KR 2006042011 A, US 20050199886 A1, JP 2005260230 A, US 7102173 B2

AB: NOVELTY - A nitride semiconductor device comprises a substrate (100); semiconductor nanorods (110) grown on the substrate; and nitride semiconductor thin film (120) deposited and distributed on and between the semiconductor nanorods to emit UV rays, visible rays, or infrared rays.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for manufacturing a nitride semiconductor device, comprising:

(A) preparing a substrate;

(B) vertically forming semiconductor nanorods having a rod shape on the substrate by causing a chemical reaction between predetermined reactive precursors; and

(C) depositing a nitride semiconductor thin film on the substrate having the semiconductor nanorods using the semiconductor nanorods as seeds.

USE - For use in optical devices, such as light emitting diodes and electronic devices.

ADVANTAGE - The nitride semiconductor device has high optical efficiency.

DESCRIPTION OF DRAWING(S) - The figure is a cross-sectional view showing a method of manufacturing GaN thin film.

Substrate 100

Nanorods 110

Nitride semiconductor thin film 120

☐ 45. Document ID: US 20050054004 A1

AB: NOVELTY - Growing a cadmium sulfide (CdS)/zinc sulfide (ZnS) graded shell nanorods (I) comprising providing a core comprising a semiconductor material, combining the core with at least one surfactant, heating the mixture and combining the mixture with a CdS/ZnS stock solution, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) growing a graded core/shell semiconductor nanorod comprising:

(a) providing a semiconductor nanorod core;

(b) combining the core with at least one surfactant;

(c) heating the surfactant/core mixture; and

(d) combining the mixture with a solution, where the solution comprises semiconductor precursors in molar ratio sufficient to cause the growth of a graded semiconductor shell on the core;

(2) a graded core/shell semiconductor nanorod comprising at least a first segment comprising a core comprising a Group II-VI, Group III-V or a Group IV semiconductor, a graded shell overlying the core, where the graded shell comprises at least two monolayers, each independently comprising a Group II-VI, Group III-V or a Group IV semiconductor;

(3) a nanorod barcode comprising a first segment of a first material and a second segment of a second material joined longitudinally to the first segment, where at least one of the first and second segments is capable of generating emission in response to excitation energy; and

(4) using the nanorod barcode to identify an element comprising labeling at least one identifiable element with at least one nanorod barcode.

USE - (I) is useful to label at least an identifiable element (claimed) in chemical and biological applications.

ADVANTAGE - The method is useful for non-radioactively detect the biological and chemical compounds both in vivo and in vitro, thus preventing the inherent problems associated with the radioactively detecting methods. The nanorods have photostability.

☐ 46. Document ID: KR 554155 B1, WO 2004109815 A1, KR 2004107700 A, CN 1806344 A, US 20060292839 A1

AB: NOVELTY - A contact fabric comprises semiconductor nanorods grown on a predetermined base material, and metal deposited on predetermined portions of the semiconductor nanorods.

DETAILED DESCRIPTION - A contact fabric using a heterostructure of metal/semiconductor nanorods, comprises:

(1) semiconductor nanorods grown on a predetermined base material; and

(2) metal deposited on predetermined portions of the semiconductor nanorods, where there is a low contact resistance ohmic characteristic or a rectifying Schottky characteristic between the nanorods and the metal depending on characteristics of interfaces between the nanorods and the metal and depending on the difference between work functions.

An INDEPENDENT CLAIM is also included for a method of fabricating a contact fabric using a heterostructure of metal/semiconductor nanorods, comprising:

(1) growing semiconductor nanorods on a predetermined base material vertically or in a direction; and

(2) depositing a metal onto predetermined portions of the semiconductor nanorods using a sputtering method or a thermal or e-beam evaporation method.

USE - The invention is used for nano-sized electronic device, e.g. Schottky diodes, optical devices, and arrays.

ADVANTAGE - The invention has a low contact resistance.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the contact fabric.

☐ 47. Document ID: WO 2004105201 A2

AB: NOVELTY - A nanocrystals film (10) useful in a solid state nanocrystals-based optical device is made by, processing a structure formed by nanocrystal solution (14) on a surface (12A) of a substrate (12), to produce a film of the nanocrystals on the surface; and creating within an interface between the film and the surface, a region capable of operating as an active region of the optical device.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for an optical device, comprising a nanocrystals film on a surface of a substrate, and an

active region of the device being presented by an interface between the film and the surface. The device is created by, processing a solution of the nanocrystals while on the surface to produce the film.

USE - Useful in a solid-state nanocrystals-based optical device, which is operable as laser device (claimed), e.g. lasers, amplifiers, and sensors. The invention can also be implemented to deposit and create lasing films in on-chip microcavities.

ADVANTAGE - The inventive method produces nanocrystals film by applying electromagnetic radiation, i.e. laser radiation, to the structure.

DESCRIPTION OF DRAWING(S) - The figure schematically illustrates a laser induced film preparation method of producing lasing films of semiconductor nanorods.

Film 10

Substrate 12

Surface 12A

Nanocrystal solution 14

☐ 48. Document ID: US 20030194503 A1, US 6776118 B2

AB: NOVELTY - A vibratory actuator (142) applies energy to a liquid layer (110) within a container (120) into which objects such as molecular circuit elements (130) are mounted, to generate standing waves (112). A signal source (150) supplies energy for dynamically positioning the standing waves in specific, so as to dynamically arrange the elements in a preset configuration on the liquid layer surface.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for robotic manipulation method.

USE - For robotic manipulation of object such as integrated circuit chips, discrete circuit components, conductive elements, mechanical components, carbon nanotubes, polyphenylene molecular wire, semiconductor nanorods, molecular electronic circuit elements, quantum computer components.

ADVANTAGE - By varying the supply of energy, the complex waveforms are generated dynamically with standing waves arranged at predetermined locations, dynamically.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic view of an energy application device of the robotic manipulation system.

liquid layer 110

standing waves 112

container 120

molecular circuit elements 130

vibratory actuator 142

signal source 150

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
semiconductor adj nanorod	48

Display Format: AB Change Format

Previous Page Next Page Go to Doc#

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 31 through 40 of 48 returned.

☐ 31. Document ID: US 7087833 B2

AB: Nanocomposite photovoltaic devices are provided that generally include semiconductor nanocrystals as at least a portion of a photoactive layer. Photovoltaic devices and other layered devices that comprise core-shell nanostructures and/or two populations of nanostructures, where the nanostructures are not necessarily part of a nanocomposite, are also features of the invention. Varied architectures for such devices are also provided including flexible and rigid architectures, planar and non-planar architectures and the like, as are systems incorporating such devices, and methods and systems for fabricating such devices. Compositions comprising two populations of nanostructures of different materials are also a feature of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 32. Document ID: US 7087832 B2

AB: Nanocomposite photovoltaic devices are provided that generally include semiconductor nanocrystals as at least a portion of a photoactive layer. Photovoltaic devices and other layered devices that comprise core-shell nanostructures and/or two populations of nanostructures, where the nanostructures are not necessarily part of a nanocomposite, are also features of the invention. Varied architectures for such devices are also provided including flexible and rigid architectures, planar and non-planar architectures and the like, as are systems incorporating such devices, and methods and systems for fabricating such devices. Compositions comprising two populations of nanostructures of different materials are also a feature of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 33. Document ID: US 7068898 B2

AB: This invention provides composite materials comprising nanostructures (e.g., nanowires, branched nanowires, nanotetrapods, nanocrystals, and nanoparticles). Methods and compositions for making such nanocomposites are also provided, as are articles comprising such composites. Waveguides and light concentrators comprising nanostructures (not necessarily as part of a nanocomposite) are additional features of

the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw Des

☐ 34. Document ID: US 7067328 B2

AB: Methods and systems for depositing nanomaterials onto a receiving substrate and optionally for depositing those materials in a desired orientation, that comprise providing nanomaterials on a transfer substrate and contacting the nanomaterials with an adherent material disposed upon a surface or portions of a surface of a receiving substrate. Orientation is optionally provided by moving the transfer and receiving substrates relative to each other during the transfer process.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw Des

☐ 35. Document ID: US 6884478 B2

AB: Semiconductor liquid crystal compositions and methods for making such compositions are disclosed. One embodiment of the invention is directed to a liquid crystal composition including a solvent and semiconductor particles in the solvent. The solvent and the semiconductor particles are in an effective amount in the liquid crystal composition to form a liquid crystal phase.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw Des

☐ 36. Document ID: US 6878871 B2

AB: Nanocomposite photovoltaic devices are provided that generally include semiconductor nanocrystals as at least a portion of a photoactive layer. Photovoltaic devices and other layered devices that comprise core-shell nanostructures and/or two populations of nanostructures, where the nanostructures are not necessarily part of a nanocomposite, are also features of the invention. Varied architectures for such devices are also provided including flexible and rigid architectures, planar and non-planar architectures and the like, as are systems incorporating such devices, and methods and systems for fabricating such devices. Compositions comprising two populations of nanostructures of different materials are also a feature of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw Des

☐ 37. Document ID: US 6855202 B2

AB: Shaped nanocrystal particles and methods for making shaped nanocrystal particles are disclosed. One embodiment includes a method for forming a branched, nanocrystal particle. It includes (a) forming a core having a first crystal structure in a solution, (b) forming a first arm extending from the core having a second crystal structure in the solution, and (c) forming a second arm extending from the core having the second crystal structure in the solution.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

☐ 38. Document ID: US 6788453 B2

AB: The present invention provides a new method for the production of inorganic semiconductor nanocrystals having a rod-like shape. More specifically the present invention provides a method of synthesizing rod shaped Group III-V semiconductor nanocrystals. The method comprises: reacting, in a high-boiling point organic solvent, a two-source precursor solution comprising at least one metal source and at least one nonmetal source, or a single-source precursor solution, with a metal catalyst or an agent capable of producing said metal catalyst, said high-boiling point organic solvent having a temperature above 200.degree. C., thereby forming a reaction product comprising semiconductor nanocrystals of various shape; cooling the reaction product, and subsequently exposing said cooled reaction product to at least one centrifugal step so as to obtain semiconductor nanocrystals having substantially rod-like shape.

The rod-shaped nanocrystals obtained by the method of the invention usually have organic ligands as a coating on their outer surfaces. Such organic ligands affect the solubility of the particles and may be substituted or removed, according to the application intended for said particles after the reaction is completed.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

☐ 39. Document ID: US 6786174 B2

AB: A system (100, 100') and method for robotic manipulation of objects (130) is provided wherein a liquid (110, 110') is agitated by the transfer of energy thereto for establishing an oscillatory motion instability in the liquid (110, 110'). The energy input into the liquid (110, 110') forms standing waves (112). The objects (130) align themselves with nodes of the standing waves (112) and thus are dynamically arranged in a configuration established by the location of the standing waves (112). The location of the standing waves (112) can be predetermined by controlling the energy input by energy application system (140) and the size and shape of the container (120). Predetermined waveforms are supplied from the signal source (150, 154) to the energy application system (140).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

☐ 40. Document ID: US 6776118 B2

AB: A system (100, 100') and method for robotic manipulation of objects (130) is provided wherein a liquid (110, 110') is agitated by the transfer of energy thereto for establishing an oscillatory motion instability in the liquid (110, 110'). The energy input into the liquid (110, 110') forms standing waves (112). The objects (130) align themselves with nodes of the standing waves (112) and thus are dynamically arranged in a configuration established by the location of the standing waves (112). The location of the standing waves (112) can be predetermined by controlling the energy input by energy application system (140) and the size and shape of the container (120). Predetermined waveforms are supplied from the signal source (150, 154) to the energy application system (140).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
semiconductor adj nanorod	48

Display Format: AB Change Format

Previous Page Next Page Go to Doc#

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 21 through 30 of 48 returned.

☐ 21. Document ID: US 20030226498 A1

AB: The invention described herein provides for thin films and methods of making comprising inorganic semiconductor-nanocrystals dispersed in semiconducting-polymers in high loading amounts. The invention also describes photovoltaic devices incorporating the thin films

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 22. Document ID: US 20030215865 A1

AB: The invention provides sensor, preferably biosensor devices and method of fabrication. The devices have significant advantages over the prior art methods having compatibility with future trends in clinical diagnostics and chemical detection. The underlying principle involves the integration of nanometer diameter, micron long metal or semiconductor rods onto a substrate to form a suspended nanomechanical cantilevers. The cantilever rods are rigidly attached to the substrate on one or both ends, and resonate at a characteristic frequency depending on the diameter, length, and stiffness of the rod. The metal or semiconductor rods are integrated onto the substrate using electrofluidic or fluidic assembly techniques. A receptor coating is placed on the metal or semiconductor rods prior to or following rod alignment using self-assembly chemistries. Sensing is accomplished when the target agent binds to the receptor substance, causing a change in the mass of the cantilever rod, and a corresponding change in the resonant frequency. This change in resonant frequency can be detected using an electrical readout. The sensing circuitry is integrated with CMOS or TFT technologies to form compact multi-analyte senor arrays on single crystal silicon, glass, or polymeric substrates. Circuits can also be included on the substrate to transmit the array data via wireless methods to a remote workstation for analysis. Devices may be integrated on chips with other analysis devices.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 23. Document ID: US 20030214699 A1

AB: The present invention provides a new method for the production of inorganic semiconductor nanocrystals having a rod-like shape. More specifically the present invention provides a method of synthesizing rod

shaped Group III-V semiconductor nanocrystals. The method comprises: reacting, in a high-boiling point organic solvent, a two-source precursor solution comprising at least one metal source and at least one nonmetal source, or a single-source precursor solution, with a metal catalyst or an agent capable of producing said metal catalyst, said high-boiling point organic solvent having a temperature above 200.degree. C., thereby forming a reaction product comprising semiconductor nanocrystals of various shape; cooling the reaction product, and subsequently exposing said cooled reaction product to at least one centrifugal step so as to obtain semiconductor nanocrystals having substantially rod-like shape.

The rod-shaped nanocrystals obtained by the method of the invention usually have organic ligands as a coating on their outer surfaces. Such organic ligands affect the solubility of the particles and may be substituted or removed, according to the application intended for said particles after the reaction is completed.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

---

☐ 24. Document ID: US 20030194503 A1

AB: A system (100, 100') and method for robotic manipulation of objects (130) is provided wherein a liquid (110, 110') is agitated by the transfer of energy thereto for establishing an oscillatory motion instability in the liquid (110, 110'). The energy input into the liquid (110, 110') forms standing waves (112). The objects (130) align themselves with nodes of the standing waves (112) and thus are dynamically arranged in a configuration established by the location of the standing waves (112). The location of the standing waves (112) can be predetermined by controlling the energy input by energy application system (140) and the size and shape of the container (120). Predetermined waveforms are supplied from the signal source (150, 154) to the energy application system (140).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

---

☐ 25. Document ID: US 20030136943 A1

AB: Semiconductor liquid crystal compositions and methods for making such compositions are disclosed. One embodiment of the invention is directed to a liquid crystal composition including a solvent and semiconductor particles in the solvent. The solvent and the semiconductor particles are in an effective amount in the liquid crystal composition to form a liquid crystal phase.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 26. Document ID: US 7228050 B1

AB: This invention provides composite materials comprising nanostructures (e.g., nanowires, branched nanowires, nanotetrapods, nanocrystals, and nanoparticles). Methods and compositions for making such nanocomposites are also provided, as are articles comprising such composites. Waveguides and light concentrators comprising nanostructures (not necessarily as part of a nanocomposite) are additional features of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 27. Document ID: US 7122827 B2

AB: The present invention is directed toward a method for fabricating low-defect nanostructures of wide bandgap materials and to optoelectronic devices, such as light emitting sources and lasers, based on them. The invention utilizes nanolithographically-defined templates to form nanostructures of wide bandgap materials that are energetically unfavorable for dislocation formation. In particular, this invention provides a method for the fabrication of phosphor-less monolithic white light emitting diodes and laser diodes that can be used for general illumination and other applications.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 28. Document ID: US 7119161 B2

AB: A pixel that includes a liquid crystal material and one or more of an anisotropic nanoparticle and an anisotropic nanostructure is provided. Displays including the pixel are also disclosed. An ink which includes a liquid crystal material and one or more of an anisotropic nanoparticle and an anisotropic nanostructure is also provided.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 29. Document ID: US 7102173 B2

AB: Provided are a nitride semiconductor device and method of manufacturing the same. In the method, semiconductor nanorods are vertically grown on a substrate, and then a nitride semiconductor thin film is deposited on the substrate having the semiconductor nanorods. Accordingly, a high-quality nitride semiconductor thin film can be deposited on a variety of inexpensive, large-sized substrates. Also, because the nitride semiconductor thin film containing the semiconductor nanorods can easily emit light through openings between the nanorods,

internal scattering can be greatly reduced. Thus, the nitride semiconductor thin film can be usefully employed in optical devices such as light emitting diodes and electronic devices.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

☐ 30. Document ID: US 7091120 B2

AB: The present invention relates to a system and process for producing a nanowire-material composite. A substrate having nanowires attached to a portion of at least one surface is provided. A material is deposited over the portion to form the nanowire-material composite. The process further optionally includes separating the nanowire-material composite from the substrate to form a freestanding nanowire-material composite. The freestanding nanowire material composite is optionally further processed into an electronic substrate. A variety of electronic substrates can be produced using the methods described herein. For example, a multi-color light-emitting diode can be produced from multiple, stacked layers of nanowire-material composites, each composite layer emitting light at a different wavelength.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
semiconductor adj nanorod	48

Display Format: AB Change Format

Previous Page Next Page Go to Doc#

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 11 through 20 of 48 returned.

☐ 11. Document ID: US 20050179052 A1

AB: A heterojunction structure composed of a nitride semiconductor thin film and nanostructures epitaxially grown thereon exhibits high luminescence efficiency property due to facilitated tunneling of electrons through the nano-sized junction, and thus can be advantageously used in light emitting devices.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 12. Document ID: US 20050167646 A1

AB: The present invention provides novel nanostructure composed of at least one elongated structure element, an elongated structure element of said nanostructure bearing an electrically conductive zone selectively grown onto the elongated structure element. The present invention further provides a selective method for forming in a liquid medium, such nanostructures.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 13. Document ID: US 20050133087 A1

AB: The invention described herein provides for thin films and methods of making comprising inorganic semiconductor-nanocrystals dispersed in semiconducting-polymers in high loading amounts. The invention also describes photovoltaic devices incorporating the thin films

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 14. Document ID: US 20050082543 A1

AB: The present invention is directed toward a method for fabricating low-defect nanostructures of wide bandgap materials and to optoelectronic devices, such as light emitting sources and lasers, based on them. The invention utilizes nanolithographically-defined templates to

form nanostructures of wide bandgap materials that are energetically unfavorable for dislocation formation. In particular, this invention provides a method for the fabrication of phosphor-less monolithic white light emitting diodes and laser diodes that can be used for general illumination and other applications.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

---

☐ 15. Document ID: US 20050066883 A1

AB: Methods and systems for depositing nanomaterials onto a receiving substrate and optionally for depositing those materials in a desired orientation, that comprise providing nanomaterials on a transfer substrate and contacting the nanomaterials with an adherent material disposed upon a surface or portions of a surface of a receiving substrate. Orientation is optionally provided by moving the transfer and receiving substrates relative to each other during the transfer process.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

---

☐ 16. Document ID: US 20050054004 A1

AB: Disclosed herein is a graded core/shell semiconductor nanorod having at least a first segment of a core of a Group II-VI, Group III-V or a Group IV semiconductor, a graded shell overlying the core, wherein the graded shell comprises at least two monolayers, wherein the at least two monolayers each independently comprise a Group II-VI, Group III-V or a Group IV semiconductor.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

---

☐ 17. Document ID: US 20040252737 A1

AB: A zinc oxide (ZnO) based nanorod is provided. The ZnO based nanorod has a quantum well or a coaxial quantum structure and is formed by alternately laminating two or more layers selected from the group consisting of a zinc oxide layer; and a layer of a material which has a lattice constant similar to that of zinc oxide, at one or more cycle.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Des

---

☐ 18. Document ID: US 20040137163 A1

AB: A system (100, 100') and method for robotic manipulation of objects (130) is provided wherein a liquid (110, 110') is agitated by the transfer of energy thereto for establishing an oscillatory motion instability in the liquid (110, 110'). The energy input into the liquid (110, 110') forms standing waves (112). The objects (130) align themselves with nodes of the standing waves (112) and thus are dynamically arranged in a configuration established by the location of the standing waves (112). The location of the standing waves (112) can be predetermined by controlling the energy input by energy application system (140) and the size and shape of the container (120). Predetermined waveforms are supplied from the signal source (150, 154) to the energy application system (140).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

---

☐ 19. Document ID: US 20040095658 A1

AB: This invention provides composite materials comprising nanostructures (e.g., nanowires, branched nanowires, nanotetrapods, nanocrystals, and nanoparticles). Methods and compositions for making such nanocomposites are also provided, as are articles comprising such composites. Waveguides and light concentrators comprising nanostructures (not necessarily as part of a nanocomposite) are additional features of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

---

☐ 20. Document ID: US 20040038007 A1

AB: A method for the assembly of a thin film containing highly anisotropic colloids that includes the steps of immersing a substrate in a first solution or dispersion comprising a first substance, wherein the first substance has an affinity for the substrate. Then, immersing the substrate in a second solution or dispersion comprising a second substance, wherein the second substance has an affinity for the first substance. A least one of the first substance and the second substance is a highly anisotropic colloid having at least one dimension differing from the others by a ratio of at least 1:1.5. The method incorporates highly anisotropic colloids using a layer-by-layer process that circumvents the tendency for separation of nanotubes at high nanotube loadings. Additionally, the method incorporates aligned highly anisotropic colloids and provides a method for carbon nanotube alignment, which among other advantages makes possible the preparation of unique criss-crossed composites.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
semiconductor adj nanorod	48

Display Format: AB Change Format

Previous Page Next Page Go to Doc#

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 10 of 48 returned.

☐ 1. Document ID: US 20070122101 A1

AB: This invention provides composite materials comprising nanostructures (e.g., nanowires, branched nanowires, nanotetrapods, nanocrystals, and nanoparticles). Methods and compositions for making such nanocomposites are also provided, as are articles comprising such composites. Waveguides and light concentrators comprising nanostructures (not necessarily as part of a nanocomposite) are additional features of the invention.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

☐ 2. Document ID: US 20070057248 A1

AB: A nanodevice (1) for a desired function includes a substrate (11), a one-dimensional nanostructure (12), a functional layer (20) having a desired function, a conductive thin film electrode (30), and an insulating layer (40). The one-dimensional nanostructure is operatively extends from the substrate. The functional layer is surrounds at least a portion of the one-dimensional nanostructure. The conducting thin film electrode is surrounds/encompasses the functional layer. The insulating layer is positioned between the substrate and the conductive thin film electrode, thereby electrically insulating the one from the other. Further, the nanodevice can incorporate one or more functional units 50, each unit including a one-dimensional nanostructure and a respective functional layer. The units may or may not share the same conductive thin film electrode and/or insulating layer.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

☐ 3. Document ID: US 20070045660 A1

AB: A heterojunction structure composed of a nitride semiconductor thin film and nanostructures epitaxially grown thereon exhibits high luminescence efficiency property due to facilitated tunneling of electrons through the nano-sized junction, and thus can be advantageously used in light emitting devices.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 4. Document ID: US 20060292839 A1

AB: Provided are a contact fabric using a heterostructure of metal/semiconductor nanorods and a method of manufacturing the same. An ohmic contact fabric having a low contact resistance or a Schottky contact fabric having a rectification characteristic is formed by selectively depositing metal of nano-sizes onto predetermined portions of zinc oxide/semiconductor nanorods and controlling the work function of the deposited metal and the interfacial characteristics of metal/zinc oxide. The contact fabric can be applied to various nano-sized electronic devices, including Schottky diodes, optical devices, and arrays thereof.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 5. Document ID: US 20060284218 A1

AB: Semiconductor devices where networks of molecular nanowires (or nanofibers) are used as the semiconductor material. Field effect transistors are disclosed where networks of molecular nanowires are used to provide the electrical connection between the source and drain electrodes. The molecular nanowires have diameters of less than 500 nm and aspect ratios of at least 10. The molecular nanowires that are used to form the networks can be single element nanowires, Group III-V nanowires, Group II-VI nanowires, metal oxide nanowires, metal chalcogenide nanowires, ternary chalcogenide nanowires and conducting polymer nanowires.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 6. Document ID: US 20060278866 A1

AB: Nanotube transistors are coated with optically responsive agents to form optoelectronic detectors. In response to illumination, an electronic property of the inventive detector changes from one value to another. It retains the new value when the illumination is removed, so that the detector remembers having been illuminated. The detector can be reset by changing a gate voltage. Spectral response of the detectors can be changed by using different agents as coating. Multiple detectors with different agents can be combined on one substrate to form a combined detector that discriminates between radiation of different wavelengths.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

☐ 7. Document ID: US 20050255629 A1

AB: A metal oxide nanostructure is formed by oxidizing metallic metal in the presence of a solution containing a liquid ligand to form a metal-ligand complex, and decomposing the metal-ligand complex to form the metal oxide nanostructure. The metal-ligand complex can be a complex of zinc or copper with formamide. In one form, the nanostructure forms ZnO nanorods having a diameter of 10 to 1000 nm, where the nanorods having a hexagonal crystallographic morphology, and the nanorods are oriented perpendicular to a substrate.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

---

☐ 8. Document ID: US 20050218377 A1

AB: A pixel that includes a liquid crystal material and one or more of an anisotropic nanoparticle and an anisotropic nanostructure is provided. Displays including the pixel are also disclosed. An ink which includes a liquid crystal material and one or more of an anisotropic nanoparticle and an anisotropic nanostructure is also provided.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

---

☐ 9. Document ID: US 20050211154 A1

AB: Disclosed herein are nanostructures comprising distinct dots and rods coupled through potential barriers of tuneable height and width, and arranged in three dimensional space at well defined angles and distances. Such control allows investigation of potential applications ranging from quantum information processing to artificial photosynthesis.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWMC | Draw. Des

---

☐ 10. Document ID: US 20050199886 A1

AB: Provided are a nitride semiconductor device and method of manufacturing the same. In the method, semiconductor nanorods are vertically grown on a substrate, and then a nitride semiconductor thin film is deposited on the substrate having the semiconductor nanorods. Accordingly, a high-quality nitride semiconductor thin film can be deposited on a variety of inexpensive, large-sized substrates. Also, because the nitride semiconductor thin film containing the semiconductor nanorods can easily emit light through openings between the nanorods, internal scattering can be greatly reduced. Thus, the nitride semiconductor thin film can be usefully employed in optical devices such as light emitting diodes and electronic devices.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Des

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
semiconductor adj nanorod	48

Display Format: AB Change Format

Previous Page Next Page Go to Doc#